Getting Started with the Alexa Skills Kit

Learn how to give Alexa new abilities with the Alexa Skills Kit.

Overview

Alexa provides a set of built-in capabilities, referred to as *skills*. For example, Alexa's abilities include playing music from multiple providers, answering questions, providing weather forecasts, and querying Wikipedia.

The Alexa Skills Kit lets you teach Alexa *new skills*. Customers can access these new abilities by asking Alexa questions or making requests. You can build skills that provide users with many different types of abilities. For example, a skill might do any one of the following:

- Look up answers to specific questions ("*Alexa, ask tide pooler for the high tide today in Seattle.*")
- Challenge the user with puzzles or games (*"Alexa, play Jeopardy."*)
- Control lights and other devices in the home (*"Alexa, turn on the living room lights."*)
- Provide audio or text content for a customer's flash briefing (*"Alexa, give me my flash briefing"*)

What Kind of Skill Do You Want to Create?

The first step in building a new skill is to decide *what your skill will do*. The functionality you want to implement determines how your skill integrates with the Alexa service and what you need to build. The Alexa Skills Kit supports building different types of skills.

To create…	Use this skill type

For example:

- Look up information from a web service
- Integrate with a web service to order something (order a car from Uber, order a pizza from Domino's Pizza)
- Interactive games
- Just about anything else you can think of

You define the requests the skill can handle (*intents*) and the words users say to invoke those requests (*utterances*).

A skill that lets a user control cloud-enabled smart home devices such as lights and thermostats.

For example:

- Turn lights on and off
- Change the brightness of dimmable lights
- Change the temperature on a thermostat

Smart Home Skill API

The Smart Home Skill API defines the requests the skill can handle (*device directives*) and the words users say to invoke those requests (*utterances*).

A skill that provides original content for a customer's flash briefing.

Flash Briefing Skill API

The Flash Briefing Skill API defines the words users say to invoke the flash briefing or news request (*utterances*) and the format of the content so that Alexa can provide it to the customer.

For more details about the differences between *custom skills*, *smart home skills*, and *flash briefing skills* see Understanding the Different Types of Skills.

What Do I Build When Creating a Skill?

You create a cloud-based service that handles the requests for the skill type and host it in the cloud. The Alexa service routes incoming requests to the appropriate service.

Different types of skills require different types of services:

For a *custom skill*, you code either an AWS Lambda function or a *web service*:

- AWS Lambda (an Amazon Web Services offering) is a service that lets you run code in the cloud without managing servers. Alexa sends your code user requests and your code can inspect the request, take any necessary actions (such as looking up information online) and then send back a response. You can write Lambda functions in *Java*, *Node.js*, or *Python*.
- Alternatively, you can write a *web service* and host it with any cloud hosting provider. The web service must accept requests over HTTPS. In this case, Alexa sends requests to your web

- Regardless of how you create your service, you also create a custom *interaction model* for the skill. This defines the *requests* the skill can handle and the *words users can say* to invoke those requests.

For a skill that controls smart home devices such as lights and thermostats, you can use the Smart Home Skill API. In this case, you develop a *skill adapter* that accepts device directives from Alexa:

- You code your skill adapter as an AWS Lambda function.
- Your adapter receives requests in the form of *device directives* to control a particular device. Your code then handles the request appropriately (for example, by turning on the requested light).
- All voice interactions with the user are handled by the Smart Home Skill API. You don't need to define the words users say to use the skill.

For a skill that provides content such as news, lists, or comedy for a customer's flash briefing, you can use the Content Skill API. In this case, you create the skill in the developer portal and configure one or more JSON or RSS feeds that contain the content:

- To receive your content as a part of their flash briefing, a customer enables your flash briefing skill in the Alexa app, and turns on one or more content feeds.
- All voice interactions with the user are handled by the Content Skill API. You don't need to define the words users say to use the skill.
- You supply one or more reliable content feeds in RSS or JSON format. The content can be audio content that Alexa plays to the customer, or text content that Alexa reads to the customer. You should own the content or have the rights to distribute it.

Next Steps

If you know what you want to build now, start with one of these:

- Custom Skills
- Smart Home Skills
- Flash Briefing Skills

Or, learn more about the Alexa Skills Kit and how skills work:

- Understanding the Different Types of Skills
- Understanding How Users Interact with Skills
- Requirements to Build a Skill
- Glossary